

IN THE CLAIMS

The text of all claims under examination is submitted, and the status of each is identified. This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (currently amended): A process for improving the efficiency of separation of an acidic aqueous mixture of solid biological matter from an aqueous liquid phase resulting from the acid hydrolysis of a naturally occurring carbohydrate containing substrate using an acid having a pKa below 4 in a concentration of at least 10% by weight and separating the solid biological matter from the acidic aqueous mixture, characterized by the addition of flocculating agent (s) to the aqueous solids bearing mixture in an effective amount to flocculate the solid matter.
2. (original): The process according to claim 1, wherein the aqueous mixture is obtained from hydrolysis of a polysaccharide based plant derived material.
3. (previously presented): The process according to claim 1, wherein the amount of flocculating agent is in the range of from 0.002 to 1 % by weight, based on the weight of solid matter.
4. (currently amended): A process of producing fermentation product comprising the steps of,
 - (i) hydrolysing a particulate polysaccharide based plant derived material in an acid medium using an acid having a pKa below 4 in a concentration of at least 10% by weight, and thereby forming an acidic aqueous mixture comprising dissolved sugar and solid matter,
 - (ii) subjecting the acidic aqueous mixture to one or more separation stages in which solid matter are removed from the acidic aqueous phase,
 - (iii) adjusting the pH of the obtained aqueous phase to a pH of at least 4,
 - (iv) fermenting the dissolved sugars of the aqueous phase by a microorganism to produce a fermentation product,
 - (v) isolating the fermentation product,characterised in that in at least one separation stage in step (ii) a flocculating agent is added to the acidic aqueous mixture in an effective amount to flocculate the solid matter.

5. (original): A process according to claim 4 in which the plant derived material comprises components selected from the group consisting of herbaceous biomass, softwood biomass, hardwood biomass, sewage sludge, paper mill sludge and the biomass fraction of municipal solid waste.
6. (previously presented): A process according to claim 4 in which the solid matter are subjected to at least one wash cycle, which wash cycle comprises washing the solid matter and then repeating stages (i) and (ii).
7. (previously presented): A process according to claim 4 in which the flocculating agent is selected from the group consisting of water-soluble or water swellable natural, semi-natural and synthetic polymers.
8. (original): A process according to claim 7 in which the polymer is selected from the group consisting of polyacrylate salts, polyacrylamide, copolymers of acrylamide with (meth) acrylic acid or salts thereof, copolymers derived from acrylamide and dialkylaminoalkyl (meth)acrylate acid salt or quaternary ammonium salts, polymers derived from diallyldimethyl ammonium chloride, polyamines and polyethylene imines.
9. (previously presented): A process according to claim 4 in which the flocculating agent is a charged microparticulate material.
10. (original): A process according to claim 9 in which the charged microparticulate material is selected from the group consisting of swellable clays, anionic, cationic or amphoteric microparticulate silica based materials and organic cross-linked polymeric microparticles.
11. (previously presented): A process according to claim 4 in which the flocculating agent is a water soluble or water-swellable polymer and a charged microparticulate material.
12. (previously presented): A process according to claim 1 in which the acid having a pKa below 4 is sulphuric or hydrochloric acid.
13. (previously presented): A process according to claim 4 in which the acid having a pKa below 4 is sulphuric or hydrochloric acid.